

HONG KONG: AN URBAN DESIGN AND DEVELOPMENT SCENARIO
FOR THE WATERFRONT OF THE CENTRAL BUSINESS DISTRICT
FOR THE YEAR 2010

by

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Submitted to the Department of Urban Studies and Planning
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ABSTRACT

After some 140 years of British administration, Hong Kong will revert to Chinese sovereignty in 1997. The change in its political status is affecting the growth and development of the city, especially the waterfront of the Central Business District (CBD) waterfront, where pressures are most intense. Despite all the past speculations of its future, there is not a single physical vision to predict and reflect its political, social and economic future. The process of envisioning has been more descriptive, deductive and reactionary than prescriptive, inductive and advocative. This thesis hypothesizes from an urban design viewpoint possible scenarios for the future CBD waterfront. By resolving specific issues for the study area, the scenarios should reduce some of the uncertainty of its future and consequently for the city as a whole.

Thesis Advisor: Tunney F. Lee
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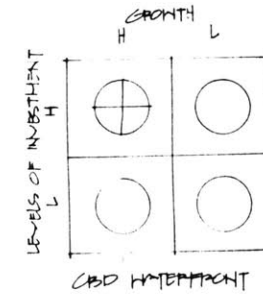
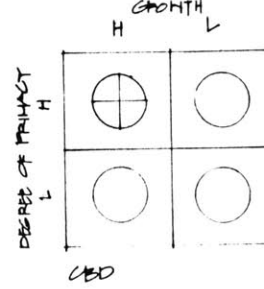
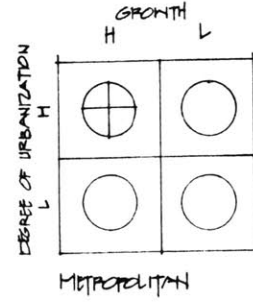
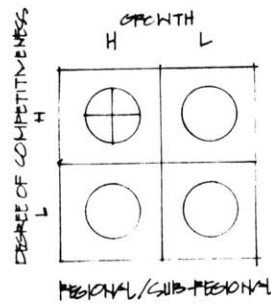
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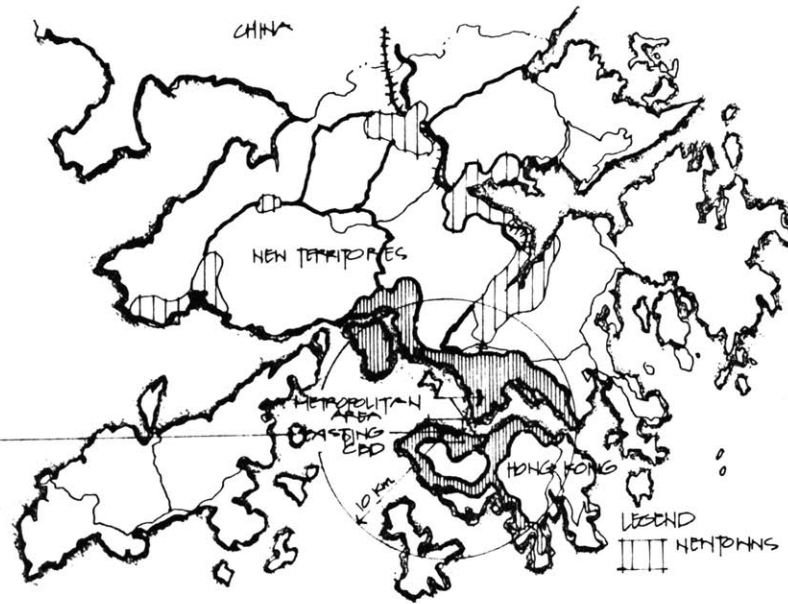
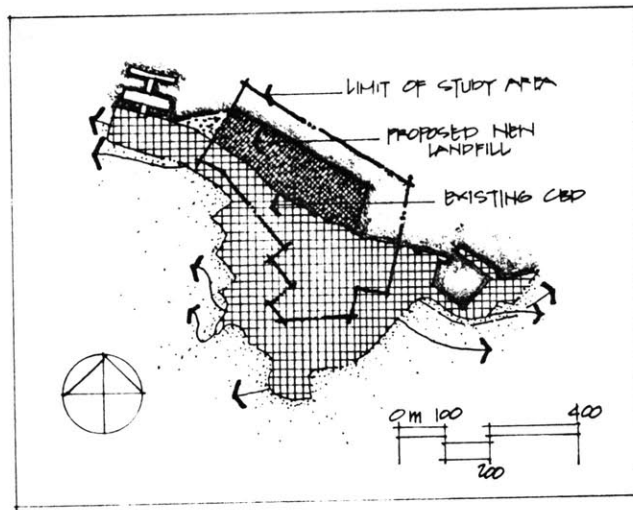
1.0 INTRODUCTION:

1.1 CONTEXT

The analysis of the change in the political economy of Hong Kong would require a general contextual framework capable of several levels of analyses. In order to achieve this objective, the context is structured at four different scales - regional, metropolitan, CBD, and the waterfront, which are illustrated by four separate matrices (see Exhibit 1). This structure enables one to analyze the relationships between growth and its factors at different scales. Its formulation takes into consideration factors such as the degree of competitiveness, urban primacy and the levels of investment which might affect growth. Each matrix is interdependent of the others so that one or more factors at any scales may affect growth singularly or collectively.



LEGEND: ASSUMED OPTIMAL SCENARIO



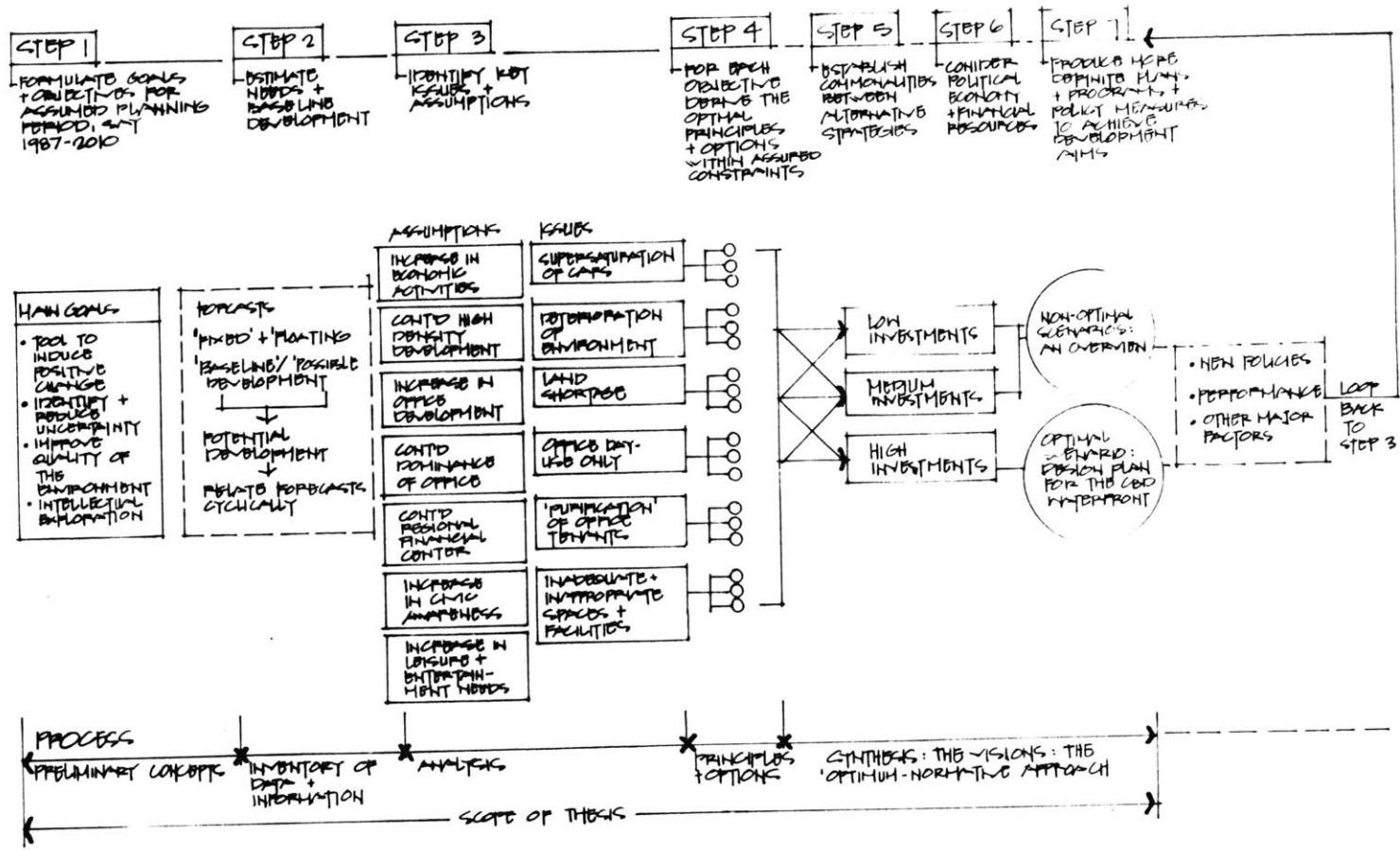
1. THE CONTEXT

Also, each matrix at all four scales has its independent factors within its own scale. This way of structuring the context therefore allows one to consider a full array of factors on growth, as the composite growth factors can be determined and analyzed by their proper linkages.

1.2 DIMENSIONS: STRUCTURE AND METHODOLOGY

The focus of this thesis is on the issues of the pedestrians and the use of public spaces. However, in attempting to arrive at an urban design and development scenarios, and their alternatives and options to resolve specific issues to accommodate growth and development, it also addresses the broader issues of public and private realm and their distribution equity as reflected in the physical environment of the study area.

The thesis is structured into five major parts. It begins with the context and dimensions of the scenarios,



2. METHODOLOGY

leading to the nature of the issues and opportunities, precedent and contemporary solutions, their application for resolutions for the study area, and a summary and recommendations for future work.

The methodology used is scenario planning (1). It is basically a framework to perceive, and if necessary, to "re-perceive" the future. Using the context as a general framework, it reveals the issues and opportunities from a broader scale to more specific issues, programs and projects at a much smaller scale. In doing so, it also provides the process to gain insights into the implications for an array of possible strategies, alternatives and options, as well as the criteria that must be performed in order to achieve the objective of stability and prosperity. Its application is based on the uncertain, unstructured and non-replicable nature of the situation. As a result, it adopts an inductive-normative sequence of persuasion (2), which should prove to be useful for decision-analysis and to induce

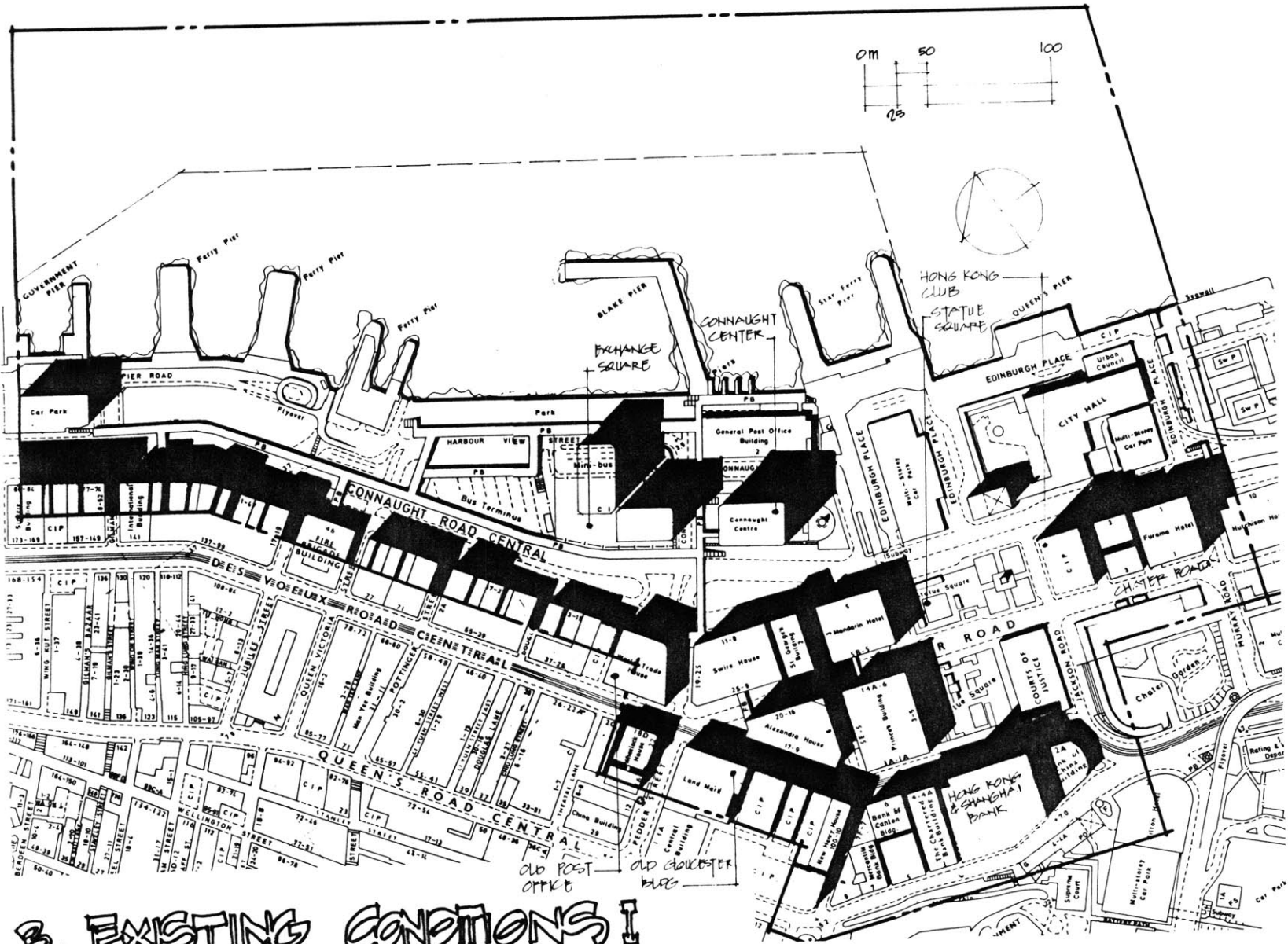
positive change. The key steps of the methodology are summarized in Exhibit 2.

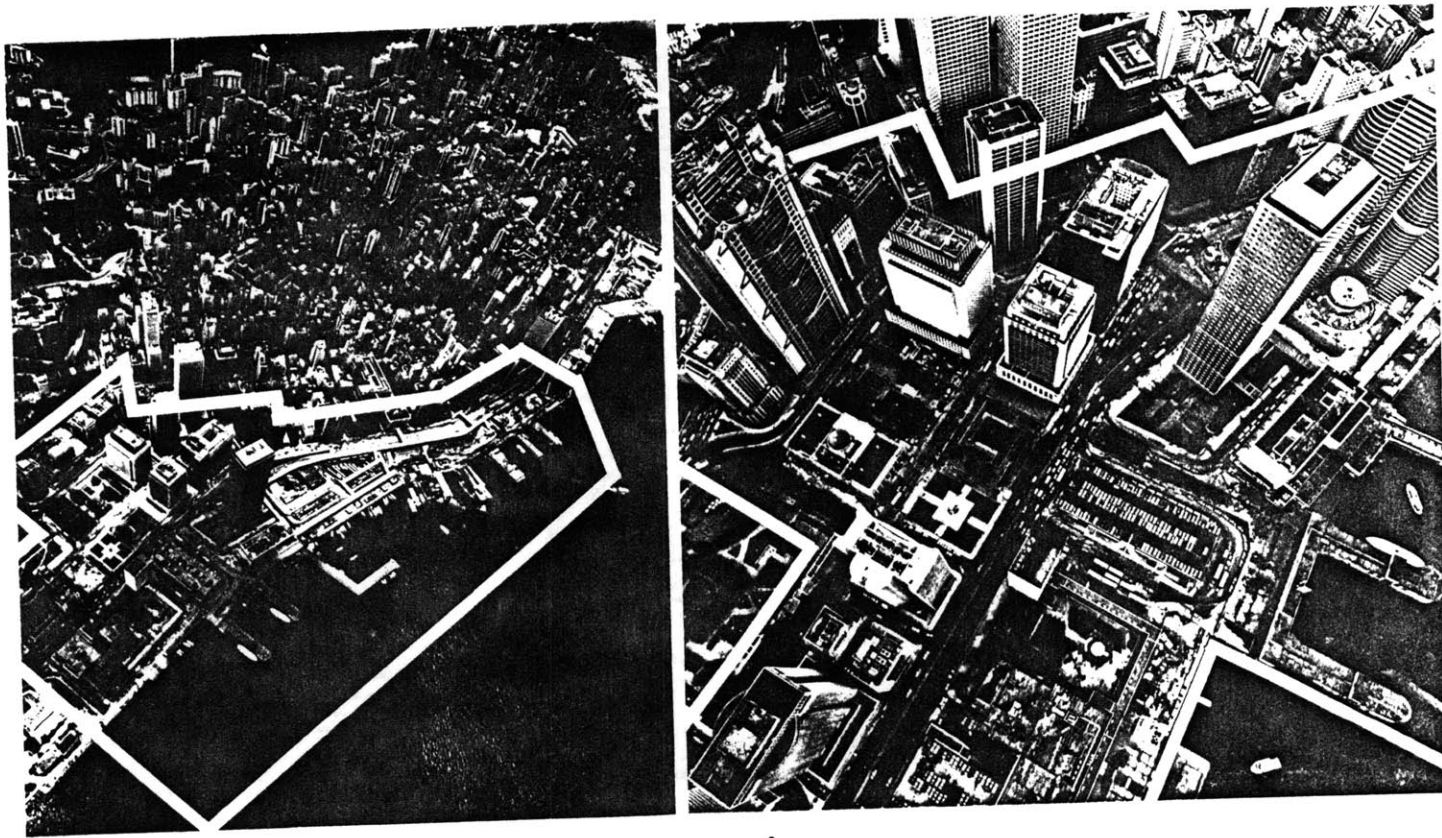
2.0 ISSUES AND OPPORTUNITIES: MYOPIC VS. VISIONARY

2.1 SPATIAL REQUIREMENTS: AD HOC VS. PLANNED

The CBD of Hong Kong is the core of an adaptive "concentric" urban model of capitalism to its geography (see Exhibit 1). The new landfill where the study area is located will be created only when there is a demand. This is leased under free market principles but the amount of land and the timing of lease is determined by the government.

Demand for additional land is generated by increasing tertiary or service-oriented economic activities, most of which are located in the CBD. To capture the highest development value, the activities must be accommodated vertically, or in tall buildings. This kind of "nodal" concentration has in turn increased tremendously the demand





4. EXISTING CONDITIONS I

on pedestrian circulation space and activities in the immediate vicinity, and the prolific use of automobiles at a broader scale (see Exhibit 5 and 6).

The old urban fabric was originally planned only for low or medium density development only. Roads and streets are narrow. In the course of hypergrowth and ad hoc development, the social benefits of the pedestrians have often been sacrificed in order to capture the maximum short term economic return. But faced with chronic land shortage and another stage for major investment in infrastructure, it seems that another threshold is reached and all the available resources, their optimal combination and priorities must be reassessed.

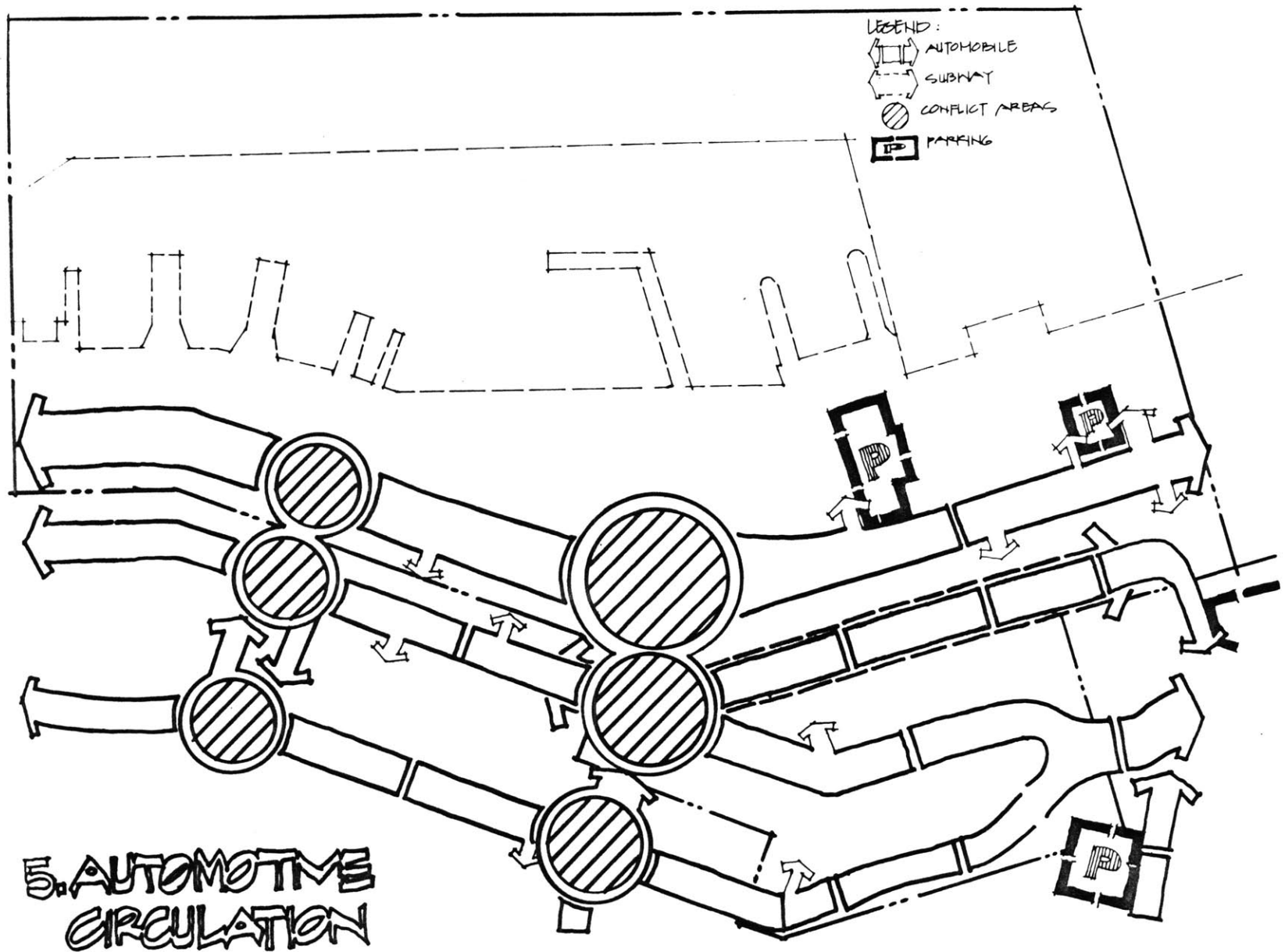
2.2 FUNCTIONAL: SINGLE-USE AND PENETRATION VS. MIXED-USE AND DIVERSION

The extreme congestion at the peak period is in part due

to the "purification" of the CBD by corporate offices (3). With extremely high land prices and office rents, many non-corporate offices have to find cheaper locations to minimize their costs. Sub-centers like Tsimshatsui and Causeway Bay have been able to capture many of these uses, in addition to other retail activities. The result for the CBD is that its function is limited to a 9-5 operation.

While only a small portion of the people travel by private cars, taxis and other automotive vehicles, their number is still significant. Although the policy is to encourage the use of public transit, however, attractive pedestrian alternatives with ease of movement are too often lacking upon their arrival. This is especially true when a lot of the potential areas for pedestrianization are taken up by the arterial roads which penetrate on ground into the core of CBD.

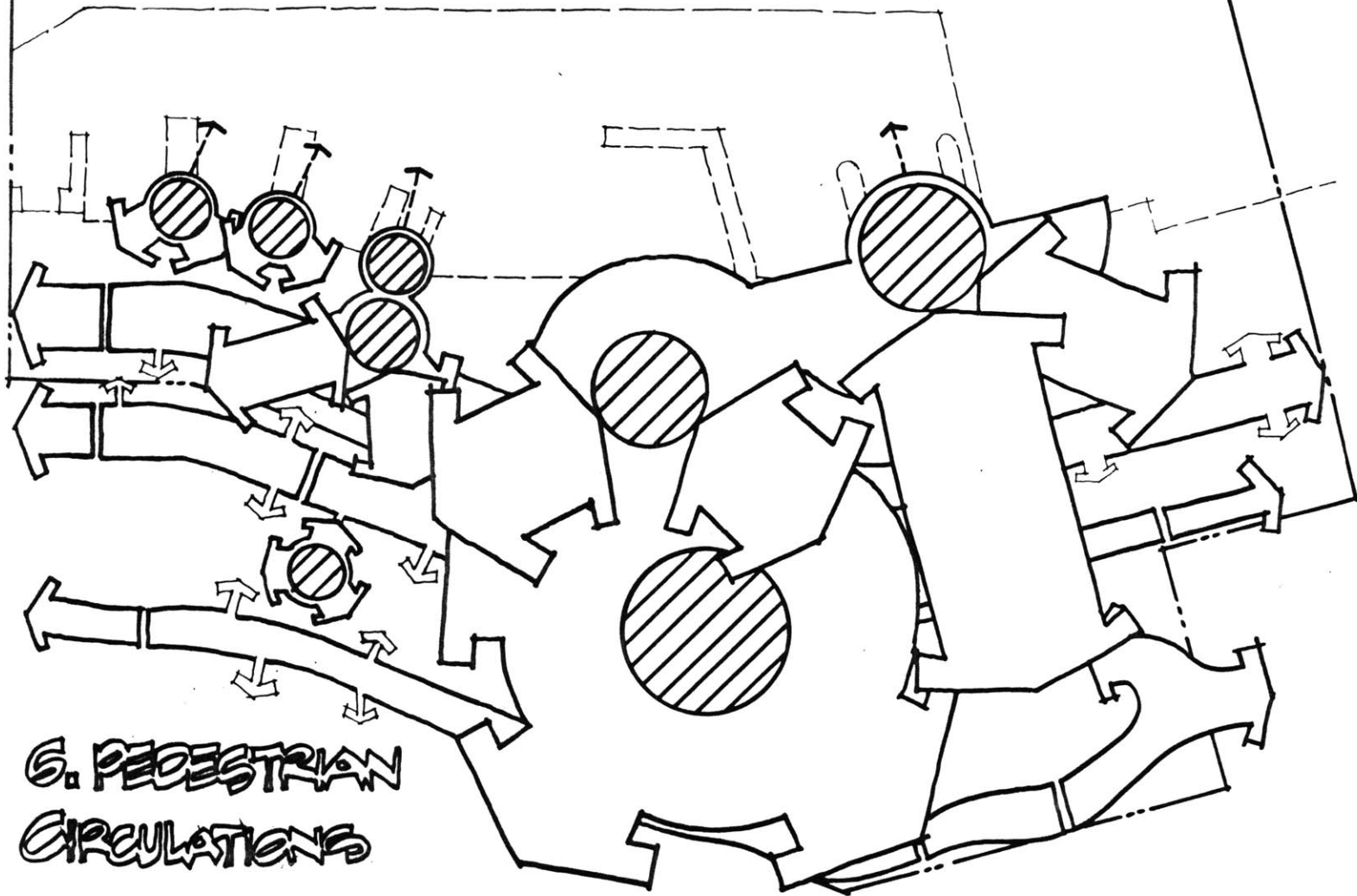
The lifelines of the CBD are its channels of movements.



At the crucial peak hours between 8-9 a.m., some 600,000 workers enter the CBD, and there will be another 100,000 more workers in the next ten years (4). While the main part of the work trip itself needs to be faster and made more comfortable, equally important is the time and effort taken up in getting to and from the major transit mode, a large part of which is at the waterfront.

The trip of a typical CBD worker from his or her home to the train, subway or bus station, through the underground corridors, up the stairways to the streets, along the sidewalk, up the escalators to the elevated walkway, down the stairways and into the hallway of the building and to the office door is slow, crowded and unnecessarily stressful. The number of such trips at concentrated points within the CBD waterfront is great. Without adequate space or better movement machines, trips become chaotic, or sometimes even dangerous.

NOTE: SIZE OF ARROWS IS GENERALLY
PROPORTIONAL TO RELATIVE
VOLUME OF CIRCULATION.

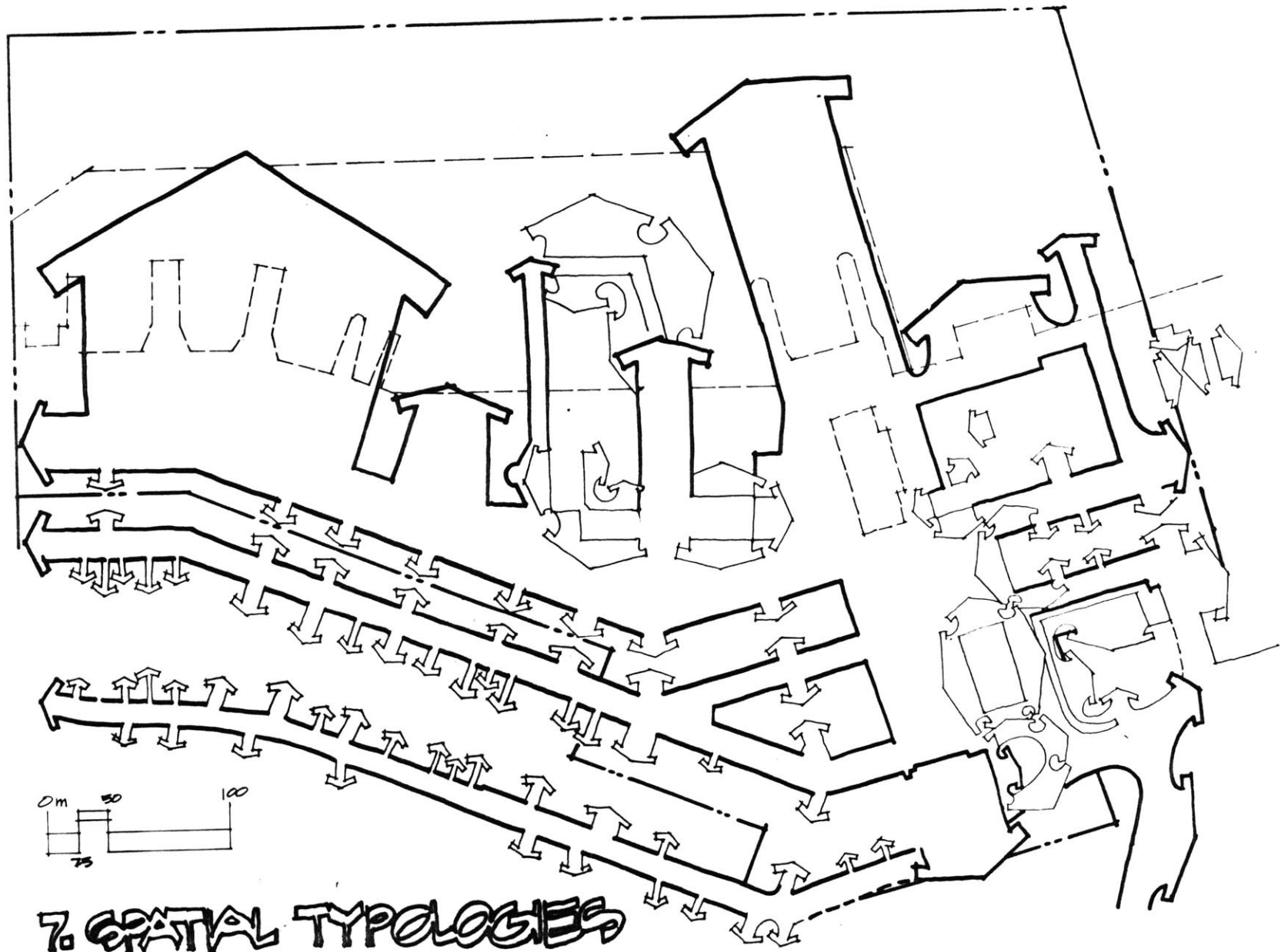


6. PEDESTRIAN
CIRCULATIONS

On the other hand, however, the extremely high density uses do provide the opportunities for redevelopment. This is especially true for the new waterfront, where developments could start anew with the introduction of 24-hour activities and pedestrian precincts.

2.3 PHYSICAL FORM: THE MONOLITHIC VS. THE "YIN-YANG" CITY

For the pedestrians, the city can be epitomized along the waterfront. Linear clusters on small narrow lots in rows of solid concrete and reflective surfaces form a strong "edge" along Connaught Road (see Exhibit 3). Shops continuously hug the sidewalk. There is little interplay of "yin-yang", or the solid and void of positive and negative spaces. The building materials seem more expressive of the age of machines. Nor are the new landmarks or transit nodes designed to create a sense of place. These were sadly created with the disappearance of the powerful clarity and identity of the old Post Office, Hong Kong Club and



Gloucester buildings (see Exhibit 3).

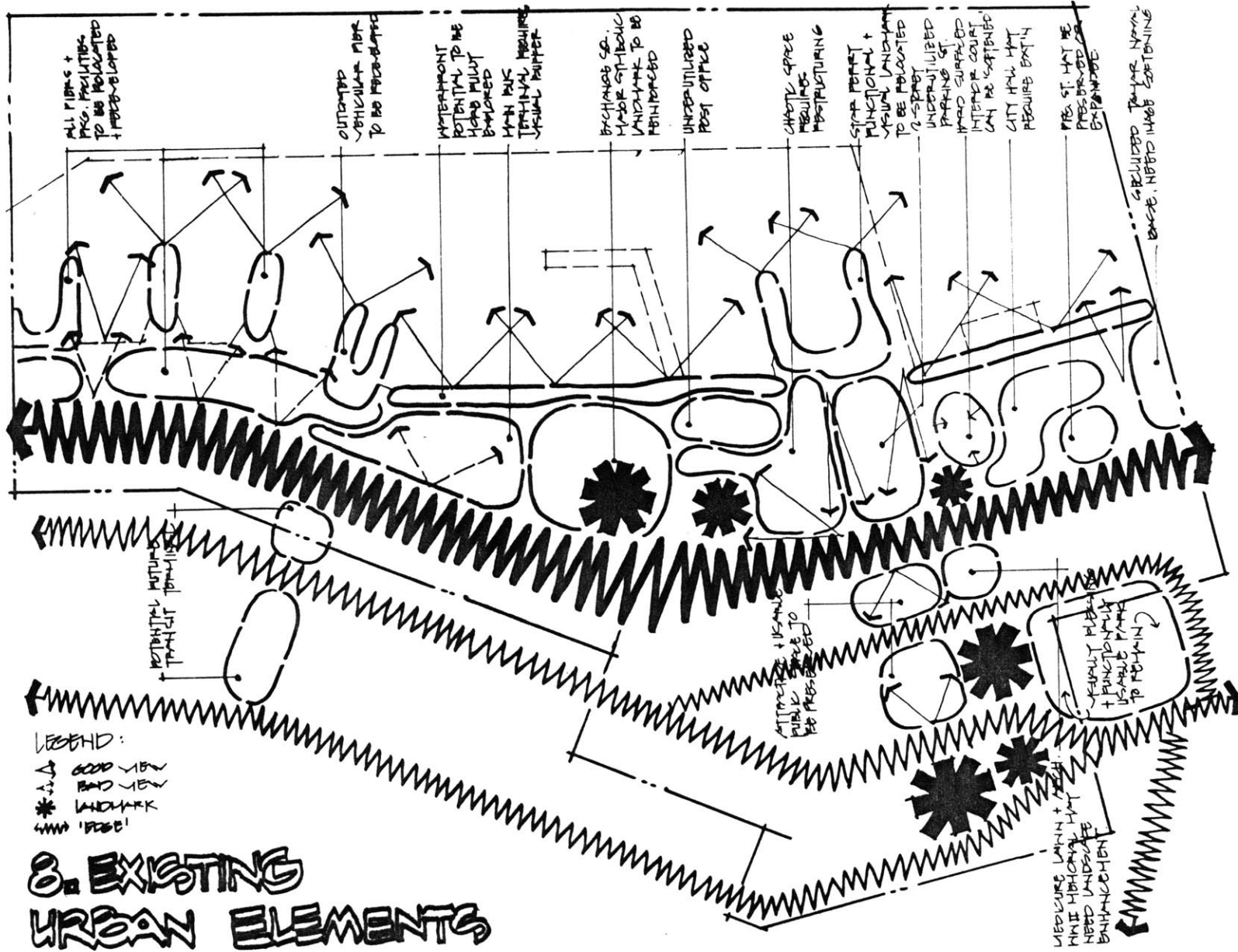
But nevertheless, opportunities exist around the Statue Square (see Exhibit 3), where the Hong Kong and Shanghai Bank has to maintain its geomantic or "fung-shui" visual corridor to the waterfront. Where its English formal garden used to be a symbol of colonialism, it has transformed into a peoples' park with attractive public gardens, sitting areas, fountains, plazas and pavilions. Although carved up by three arterial roads, this is the only public space for a relief. Elsewhere like Exchange Square on the deck level is showing some effort but access is a problem and the glare and reflective nature of the materials is overwhelming.

For the cross-harbor commuters, they might have noticed that the clustered peaks which used to signify the historic harborscape are gradually losing their distinct slopes, as more buildings coalesce into an undifferentiated mass along the waterfront and up the slope. Elsewhere, however, the

plight of piers, garages, naval base and a few underutilized structures such as the temporary post office illustrate the impending formless nature of the waterfront, which is subject to tides of immediate development pressures. But despite some of these minor deficiencies, the overall experience could be quite exhilarating. While enjoying the sea breezes and quietness on the ferries, they can always have a few relaxed moments glimpses of the waterfront (see Exhibits 7).

2.4 AMENITY: PRIVATE TERRITORIES VS. PUBLIC SPACES

The physical form of the waterfront is also a good example of defining the public and private boundaries, which in part determine the availability of amenities. So far, the needs of the pedestrians have given way to the maximization of economic activities and private use of buildings. Sidewalks are already way too narrow. Buildings are not set back from streets, but cantilevered out from the second floor up to gain the maximum development benefits. Most designs



inhibit easy movement into and out of the spaces. Walls and shops typically keep the pedestrians close to the stream of cars, with those at the back pushing those at the front or side.

There are few places to escape from the crowd or to relax in an open space. Places to sit are rare. Directional signs are difficult to find, or unreadable as they are engulfed by a large number of other signs for commercial purposes. Major underground pedestrian corridors are crowded which aggravate the feelings of being trapped in the ground. Pedestrians must walk many more steps to avoid dangerous conflicts. People are shut off from the remarkable waterfront which flanks the CBD. The basic elements of the ground level, sunlight and fresh air have unnecessarily denied the millions who must circulate both above and below ground.

2.5 CONCLUSIONS

These are the amenity issues which urban design can attempt to address. There are, of course, still other serious deficiencies such as air pollution, noise, odors, litter and poor building designs, or the rejection of these obtrusive sensory stimuli. But the potential for preservation, enhancement and integration of the public spaces should deserve some attention.

The quality of the physical environment of the Hong Kong CBD affects its economic and cultural life. The more difficult and stressful the area becomes, the more it will take away the vitality and interest of its workers and other users. If the economic competitiveness of Hong Kong in the region is to be assured in some way, and if the use of the CBD is to be a dignified and enjoyable experience, good urban design is essential.

3.0 THE SCENARIOS: AN OVERVIEW

The context and the issues as analyzed may have many design and development implications and consequently may result in many scenarios for the waterfront. However, there are basically three approaches to resolve the common conflicts: 1) To design an individual public infrastructure for each of the possible scenario; 2) To design and phase a public infrastructure capable to serve all the possible scenarios; and 3) To design an "optimum" public infrastructure for a scenario which is most likely to happen.

In order to have a focus for the thesis argument and to achieve the objective of reducing uncertainty, the approach of an "optimum" public infrastructure is taken. However, in order to provide sufficient details for the context, and to

keep the number of scenarios in a manageable way, a total of six scenarios are hypothesized, with each having different objectives and consequently varied degrees of planning interventions. An overview of these six scenarios is provided below.

3.1 SCENARIO A-1: A NEW OFFICE-CIVIC CENTER/PEDESTRIANIZED PUBLIC SPACES

Hong Kong will remain stable, a truly autonomous district and a primate "gateway" city to southern China. The economy will continue to prosper and transform into a second stage of industrialization. The CBD will strengthen itself and will be more competitive as an international financial and trade center. The Hong Kong and Shanghai Bank will still be one of the most influential institutions. The government will plan on a more longer term basis, and with the appropriate tools, will aim at more equitable distribution especially in terms of transferring private development gains

into public benefits.

The CBD waterfront will continue to be the hub of the city. The high growth situation and the intense development of the new CBD waterfront will require high investment. A new office-civic megastructure will be developed to accommodate the needs of increasing economic activities. Access to the area will require a new waterfront two-level viaduct and an tunnel running east-west under water, and the development potential of the air rights of the decking will be fully utilized. In return for very high density development, the developers must contribute a substantial part of the development for public use, and every effort must aim at total integration of the megastructure.

3.2 SCENARIO A-2: A NEW OFFICE-CIVIC CENTER/A BOULEVARD

The political economy will be very similar to that of Scenario A-1, but the government will continue to plan by

"demand" on an ad hoc basis. The economy will be fairly stable but in order to get the highest revenue from land leases, keen competitive bidding for smaller land parcels will be encouraged, and the timing of which will be determined by the government.

There will be little or no response in the leasing of the land in the waterfront which will require more integrated forms of development and the contribution of substantial private spaces for public use because the developers prefer to maximize their profits. The access road will now take the form of an open boulevard, dividing the center into two clusters. Priority will be given to transit and auto circulation, and pedestrians will continue to use the elevated walkway system which will be somehow connected and extended. While more sunlight and air can penetrate into the lower levels, the development potential of the air right space will be sacrificed.

3.3 SCENARIO B: "DO-MINIMUM" PROJECTS

Hong Kong may be in any form of political system but it will remain only as a "regional" trade center, or a "dependent" city to its region or hinterlands. It may be subject to various pressures and constraints such as intense competition, protectionism, or political instability in China to the extent that it may have gone into a recession. Both the public and the private sectors will have little confidence or will have tight budgets on development.

The access road will take the form of a simple loop. There will be only minimal developments around the original waterfront where the infrastructure could be easily extended. Development of the rest of the vacant land will have to be phased. The piers will be relocated generally in the same location but they will remain as utilitarian structures to satisfy only the basic functional needs. Integration of various developments will be a problem.

3.4 SCENARIO C: A SELF-SUFFICIENT MIXED-USE COMMUNITY

The government will exercise some planning interventions on the market economy to resolve some of the circulation and employment location issues. As a result, the land in the CBD and its waterfront will lose part of its "real" market value and it will not go to the highest and best use. There will be substantial demand for housing because of population growth but little investment because of budget constraints.

The CBD waterfront will become a self-sufficient mixed-use office and residential development. Similar policy may be carried out in other areas and there will be less commuters. The Hong Kong and Shanghai Bank will not be the most influential bank anymore and the land on its visual corridor to the harbor will be developed into housing. A fairly large community, neighborhood and office park system will be incorporated to the development.

3.5 SCENARIO D: AN URBAN PARK SYSTEM

The government may impose even much stronger planning interventions on the market economy. The land may completely lose its "real" market value and may not go to the highest and best use. The land price will be determined administratively and the concept of development will be that it should have the maximum public benefits, especially on open space. Similar policy will be carried out in other areas.

The waterfront will be developed into an urban park system open to the public. With planned and mandatory decentralization of office facilities and employment locations, and with only a few high density developments, congestion will no longer be a problem. All the workers and other users can enjoy using the park.

3.6 SCENARIO E: NO DEVELOPMENT

The central government of China may completely take over the local government of Hong Kong and may superimpose on it a "socialist" political economy. All land and properties will be nationalized, expropriated or confiscated. All investors will lose their confidence and will be leaving.

The land on the waterfront will remain vacant and undeveloped. Most office buildings will be vacant, or turned into some other uses such as government offices, or even residences. A prolonged period of this situation will result in a dilapidated environment as buildings will begin to deteriorate and there will neither be incentive to replace, nor responsibility to maintain them.

Summary: It should be emphasized that the six scenarios as hypothesized are not discrete choices of alternatives, but rather different possible futures for the CBD waterfront. It is possible that some of the elements or options within any of the scenario could also occur in a very different

scenario. This degree of uncertainty would require a "robust" development strategy to anticipate and accommodate the elements and options of some of the possible scenarios as outlined above.

4.0 THE "OPTIMUM CORPORATE" STRATEGY: SCENARIO FOR A NEW OFFICE-CIVIC CENTER/PEDESTRIANIZED PUBLIC SPACES

The selection of the "optimum" strategy for the CBD waterfront is based on several criteria that it must perform. In broader terms, it must be able to help maintain stability and prosperity, reflect the true spirit of the Sino-British Joint Declaration (5) in letting Hong Kong to remain autonomous, and keeping the capitalist economy for another fifty years.

In more specific terms, it must conform to, take full advantage of, or even strengthen the existing "corporate strategy" already operating in the CBD. As a land policy tool, this strategy (6) has the following characteristics:

- o All land is owned by the government, and its supply

is carefully managed;

- o Given stability and prosperity, the demand of land by corporations should continue, with high land prices contributing substantially to government revenue;
- o With substantial government revenue from land sales and leases, the city as a whole is able to maintain a very low and simple tax structure, which is one of the key incentives for investment; and
- o A large part of the government revenue continues to be spent on areas such as subsidized housing, which in turn keeps labor wages low, and its products cheap enough to compete effectively in the world market.

Thus we can see that the new CBD waterfront may potentially have a crucial role to play in the overall economy of the city. If the development strategy of any of the CBD waterfront scenarios could perform these criteria satisfactorily, then it might be able to continue to play a strong role in the growth and development of the city. The

development implications are, if high growth rate, high productivity and strong competitiveness are the objectives for the city as a whole, then the programs and projects of the preferred waterfront scenario must also assume high density development to accommodate corporate needs. Thus in political, social and economic terms, it seems most appropriate to advocate the existing development strategy that matches the future of Scenario A-1: "A New Office-Civic Center/Pedestrianized Open Spaces". Given that this scenario is what is intended and most likely to happen, then a development strategy to indicate its functions, physical attributes, amenities and form could be further developed.

4.1 FUNCTIONAL PRINCIPLES: MIXED-USE AND THE "ACCESS TREE"

Functions here denote the purposes, the uses and the operational requirements of a particularly space. Conceptually the CBD waterfront could be more than just for office use. More 24-hour ancillary activities and services

such as entertainment, hotels, gourmet restaurants, retail and games area could be provided so that economically it could be more efficient and viable.

In terms of circulation, the principle is the "access tree" system. This consists of the office building corridors as branches, elevators as trunks, and underground paths as roots (see Exhibit 11). Its effectiveness depends on the integration of various parts of the tree - its physical infrastructure such as transportation, streets, water, sewer and electricity, most of which are provided publicly. But the main function of the system is to make the movement of people possible.

For horizontal access, particular attention is paid to the streets and the public space on how they work and integrate to the other components of the larger system, especially on ground level. Generally it is a principle to allow for efficient circulation in the shortest distance

possible, broadened job-choice and maximum social interaction. Public planning and guidance are particularly needed where most of the workers must arrive underground and from the elevated walkway, where employment is growing more concentrated with the increasing dominance of office activities which produce higher pedestrian volumes, and when the trend is to integrate new buildings with public transit terminals.

For vertical access, the principle which responds to emerging pedestrian circulation needs and opportunities is the use of building corridors, elevators, escalators and elevated walkways. It is a principle which integrates various modes of transportation, main pedestrian movement systems, and grade separations which favor pedestrian paths with the minimum stress possible.

If the design of the major systems were coordinated, the inherent form-determining power of the infrastructure could

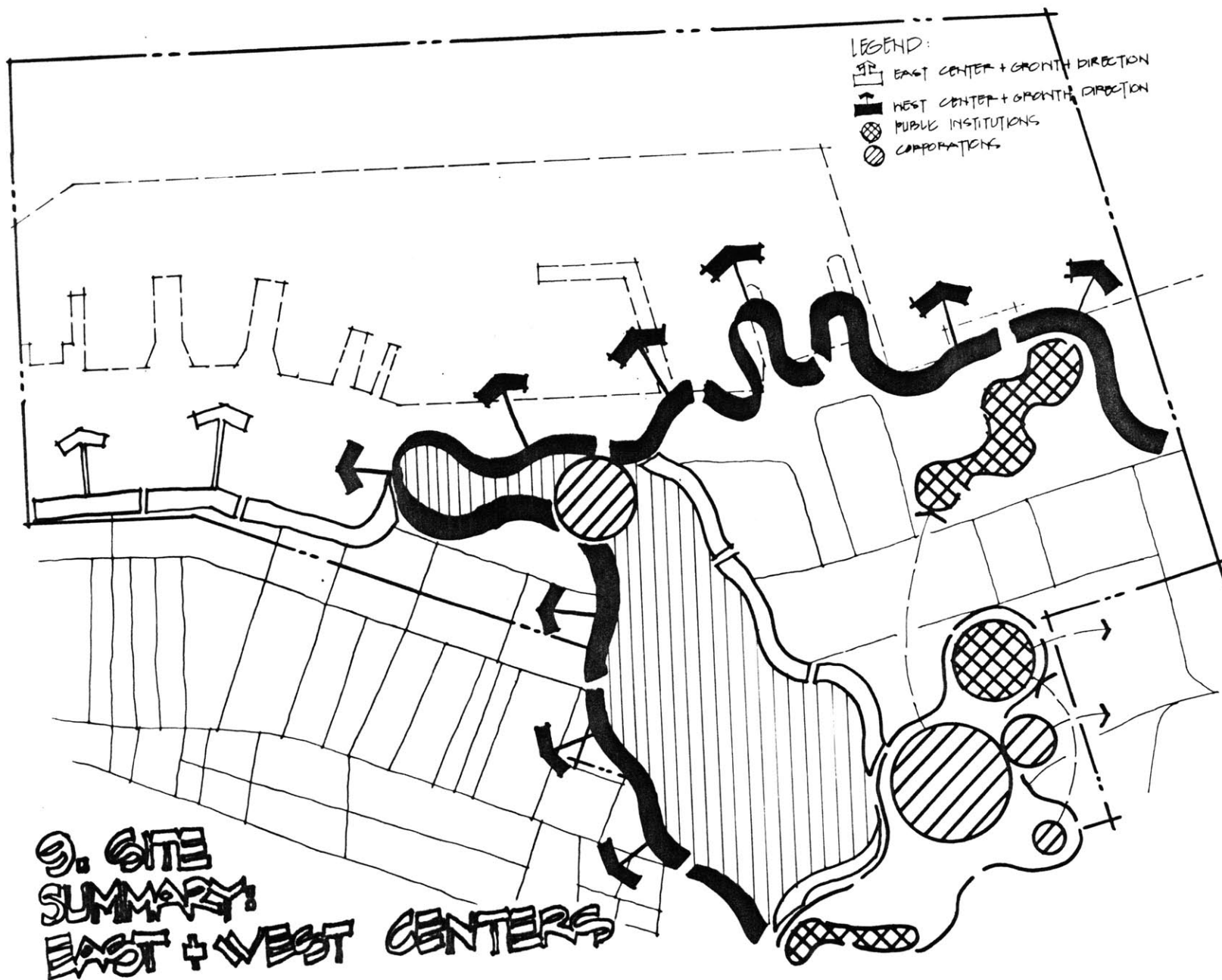
be consciously shaped to achieve selected urban design objectives, such as pedestrianization, the provision of services, and the idea of high clusters amid low areas.

4.2 PHYSICAL FORM PRINCIPLES

The physical form denotes the shapes and patterns of the various operating systems. In the CBD and along the waterfront, there are various physical forms which have been shaped by historical, cultural, social and economic forces. Generally these forms could be described by using eight contrasting but interacting categories - east and west, traditional and modern, formal and organic, and highs and lows.

4.2.1 East and West

Historically the CBD has always been the confluence of the eastern and western cultures (see Exhibit 9). The



eastern center lies on the western side, while the western center lies on the eastern side. The eastern center is dominated by the Chinese way of doing business, which is often reflected by the setup and design of the shops, stores and offices. The use of the Chinese language is predominant. The western center is primarily international corporate headquarters and English is much more widely used (see Exhibit 9).

4.2.2 Traditional and Modern

The eastern center adheres to the more traditional way of lifestyle. Shops are small and at ground level in narrow streets and lanes, many of which are restricted to pedestrians. The modern offices are usually larger, equipped with modern facilities, situated on larger parcels, fronting wider roads and streets.

4.2.3 Formal and Organic

The eastern cultural and the traditional areas are generally organic, often adapting one single space for different uses. The western cultural and modern areas tend to be more formal, with clearly defined uses and functions for one single space. Exceptions do exist at both the architectural and the urban design scales.

4.2.4 Highs and Lows

Generally both the east and the west centers are almost uniformly high density developments based on a grid street pattern. However, there are still areas to the south and west where the older center displays a more varied and interesting townscape of "highs" and "lows".

4.3 AMENITY PRINCIPLES: PEDESTRIANIZATION & SERVICE PROVISION

Amenity here means urban design elements which transcend

pure utilitarian purposes. The objective is to facilitate the relationship between people and their fellows, as well as with the natural and built environment in ways that will be characterized by dignity, grace and a minimum of stress.

A better relationship with nature implies far less visual and physical barriers between people and the sun, sky, trees, grass and water. There should be more parks and the waterfront made more accessible, especially in good weather. There should be protection against bad weather such as controlled spaces within the access tree.

The provision of weather-oriented amenities requires a subtle combination of man-made and natural elements. Trees, shrubs, ground covers, grass, water and other elements can modify or mitigate the effects of sun, driven rain, wind, glare and reflective heat. Arcades, overhangs, covered walkways and walls can offer protection from precipitation and severe temperatures. Water bodies such as the harbor,

fountains, pools and ponds can provide a sense of relief from heat especially in summer time. Wider circulation paths can lower human density and reduce the effect of body heat. Rest areas can facilitate recovery from walking, shopping and heat-induced fatigue.

Visual amenities can be both functional and aesthetic. Signs, symbols, rich patterns and textures or three-dimensional elements such as artwork can provide public information, safety, orientation and sensation. The sense of good hearing and smell of nature and delicacies should be encouraged. Noxious fumes, dust, odor, noises and other nuisances from cars and machines should be discouraged.

Space and its scale are important amenities. Besides the functional requirement of adequate surface area and standards, there is also the quality of the vertical height. In areas of large assembly of people, and along the waterfront, there should be more opportunities to experience

vast spaciousness amidst the tension of intense daily urban life.

4.4 THE FORM HYPOTHESIS

The urban form for the new CBD waterfront is hypothesized on the interplay of the antecedents and historical prototypes, as well as the new prototypes, particularly those that have come about as a result of technology.

4.4.1 Antecedents and Prototypes

Historically the CBD waterfront has evolved from a small Chinese fishing village into an international financial and trading center. In this evolution, there is an interplay of urban form antecedents and prototypes of the east and west. While the "streets", "lanes" and "gateways" (7) exist in both cultures, with some differences, they are both used for the

layout of commercial areas, such as the "main" street or "market" street. On the other hand, the "malls" and the "plazas" (8) are associated more with the west. These have transformed over time, in various forms and ways, ranging from symbols of political authority to social and gathering places for people.

The power and grandeur of Versailles, the richness of Piazza San Marco and the vibrant streets and lanes of Hong Kong itself are some of the best examples. The prototypes could range from protected human-scale covered arcades, busy main street, narrow and intimate shopping lanes and entry gateways to grand, formal urban plazas, malls and gardens with soft mowed lawn for more impromptu activities. The unique qualities of their conscious mix could probably be found only in the CBD, especially in the new waterfront, where its international nature and its extremely high density would provide more opportunities for exploration.

4.4.2 The New Prototypes

In addition to the antecedents and historical prototypes, there are also the new prototypes that have come about with contemporary technology. One of them is the "megastructure" which can accommodate and take full advantage of high density development by multi-level decking, while creating a large variety of forms and spaces. Examples are the Grand Central Station of New York, Place Ville Marie in Montreal, and Tokyo Station in Japan. All involve the conscious architectural organization of clustering of activities around the transit terminals including the use of air rights over the roads and tracks.

In the CBD, the recent completion of the subway and the increasing usage of the elevated walkway system have indicated the need to apply some of the megastructure ideas for the waterfront development. The design principles suggest that major urban activities be clustered in large

centers. This conforms to the general trend of the urban functioning of the CBD economy, with the growing predominance of office work.

4.4.2 Site Factors

In addition to antecedents and prototypes, considerations are also given to the existing site factors which may have their bearing in formulating the urban form. These can be grouped as physical, form and functional factors.

Physical and Form Factors

The hilly topography on the south serves as a backdrop and dramatizes the major existing activity nodes which rise to the peaks. The waterfront can be viewed from the north, east and north-west but are best viewed from the harbor on the north. In terms of urban design, its appearance would be

most striking if the heights and concentration of buildings could vary according to their location and access needs.

Also, one can observe that there is a clustering of office buildings around Statue Square. The Hong Kong and Shanghai Bank, the old Bank of China, the Exchange Square, Connaught Center and the Hong Kong Club stand as a relatively distinct and recognizable group of towers. The Legislative Council building (formerly the Supreme Court) is the only low historical landmark amidst the skyscrapers. The framing of this major public space and the strong, axial visual corridor of the Hong Kong and Shanghai Bank should be preserved and enhanced.

To the west, where the towers are tightly packed together on narrow lots typical of the old urban fabric across Connaught Road. There is a potential to extend or to "borrow" this urban form to unify the older and the newer development, and to minimize the "edge" effect of Connaught

Road.

Generally the concrete structures were built in the 1950's and 1960's and the glass curtain wall and steel structures in the 1970's and 1980's. The overall mix of a compact, shiny glazing and concrete blocking with the steep rocky Victoria Peak as a backdrop provides a unique urban landscape towards the harbor. The juxtaposition of high-low groups should provide more interest to this landscape.

The existing urban form is a direct response to five additional factors - accessibility, land availability, highest and best use of land, amenity and "image". These factors, together with the advantage of related enterprises of being close together, have resulted in clustering of specific office towers. Various types of offices have clustered around the transit stations, where land is available in large parcels or by single ownership of several key parcels. Good shopping, restaurants, or the abstract

advantage of the "image" of an area often relate to the nature of the business, status and respectability which consequently associate with higher prices or rents. The new landfill is a prime example where all these form factors will contribute to the integrated development of a megastructure.

Functional Factors

The dominant functional factor is office employment. Many types of office activities need to be close to related activities and to be near points of easy access. These activities, especially the corporate headquarters and policy-making establishments, particularly seek out the CBD clustering so that face-to-face meetings could be held easily to reduce critical business uncertainties.

Other existing non-Office activities such as retail, specialty shops are supportive. With the compactness and density of the CBD, their existence are important but their

influence on office location are minor because of numerous alternative locations nearby.

Summary of Factors

All these factors have various design and development implications. While some have imposed constraints on space, others have provided opportunities for efficient high density development. By deliberately designing a public space system, some urban form circulation systems could be generated to respond to the user needs and patterns, mitigate the negative impacts and enhance the positive qualities.

4.5 FORM SYNTHESIS: CIRCULATION AND PUBLIC SPACES

Based on the form hypothesis, site factors and the projected spatial needs, the form circulation is further developed into a mass, an individual and a composite system.

4.5.1 Mass Circulation System

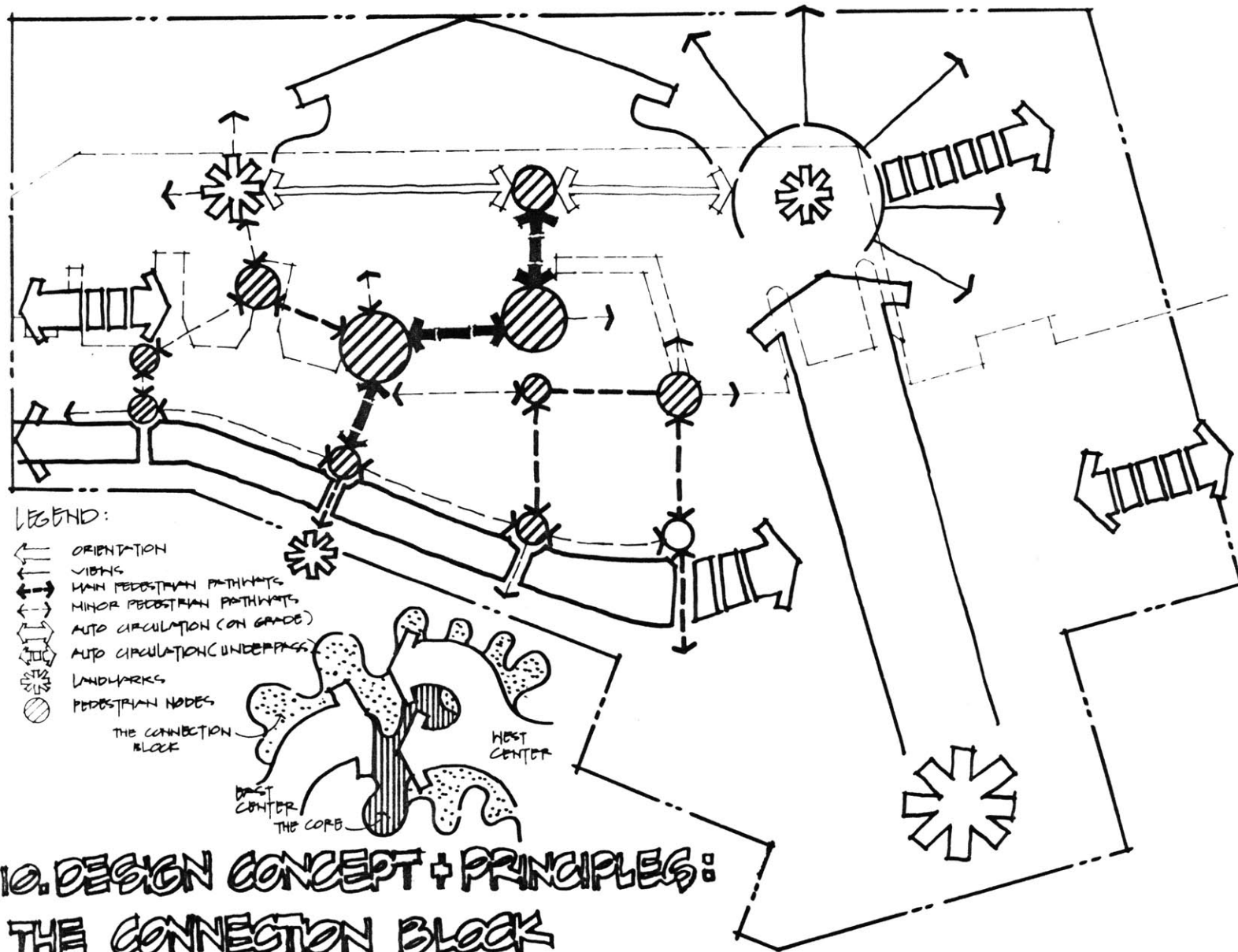
An analysis on the possible change over time and stages of development of public infrastructure helps to predict and guide the future form implications (see Exhibit 10). This analysis generally suggests not only subway and road extensions, but also new and more technically advanced high capacity shuttle system for crosstown movement as well as the expansion of elevated pedestrian walkway system linking the old CBD to the new waterfront because new developments will only occur with the provision of adequate access. The key infrastructure options are:

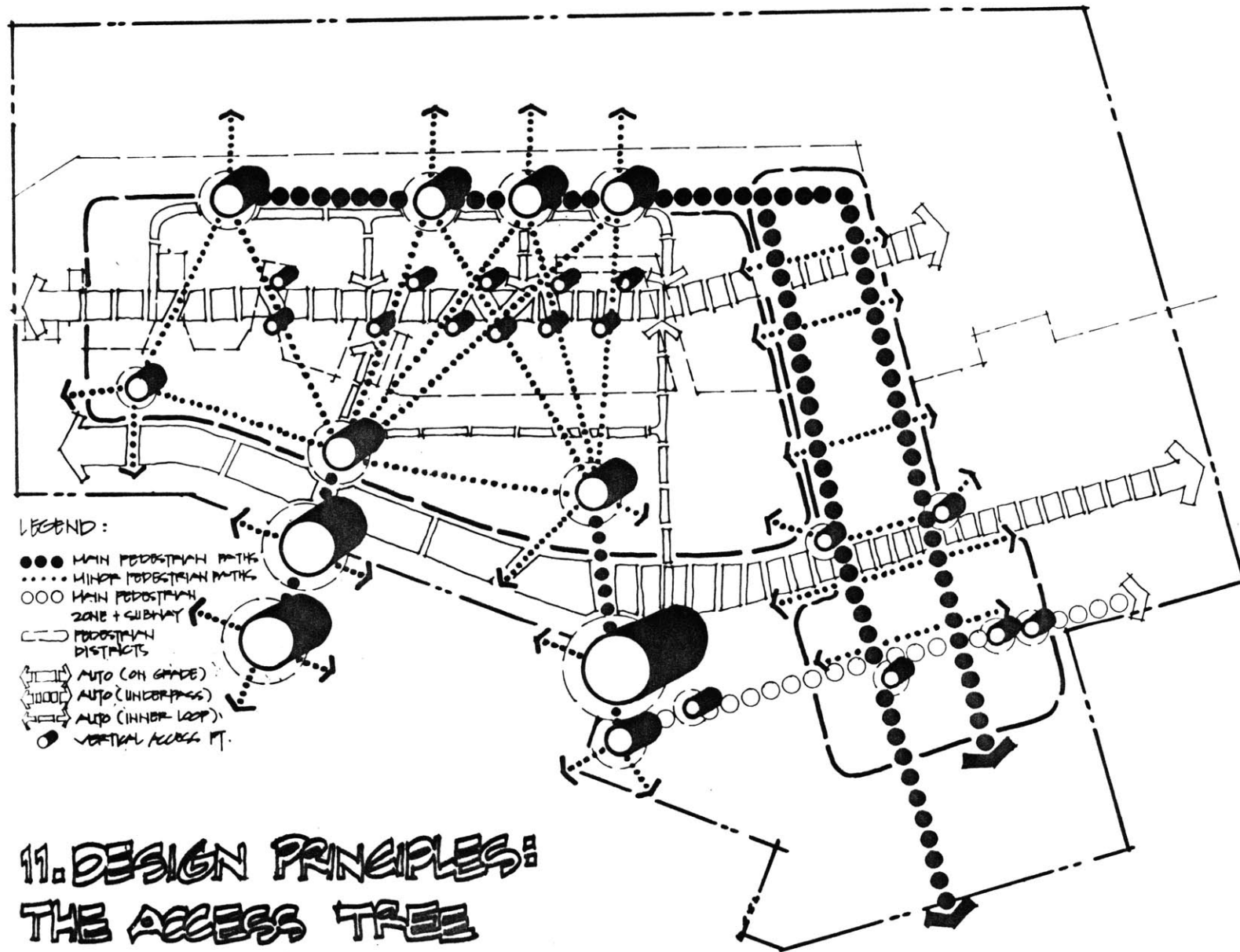
- o a 2-level waterfront viaduct and tunnel;
- o a Connaught Road underpass;
- o collector road grid;
- o major central transit terminal;
- o secondary central waterfront transit terminal and piers;
- o CBD sky-bus loop;

- o open air/light mass transit concourse;
- o major pedestrian zone at Statue Square and waterfront promenade; and
- o secondary pedestrian decking - main street, lanes and plazas with covered arcades, interchange spaces and all weathered climatization for dense shopping districts.

4.5.2 Individual Circulation System

In order to achieve its function of easy face-to-face communication among very large number of people, the waterfront must remain compact. However, despite the inefficiency of individual movement systems such as autos and trucks per unit road area, some provisions would be necessary. Autos should generally be kept and parked outside of the CBD and its waterfront. People should leave their cars, get into crosstown movement systems, or walk to the CBD core. However, there should be short term pick-up and paid parking near the transit terminals and piers, and service and





pick-up at appropriate locations.

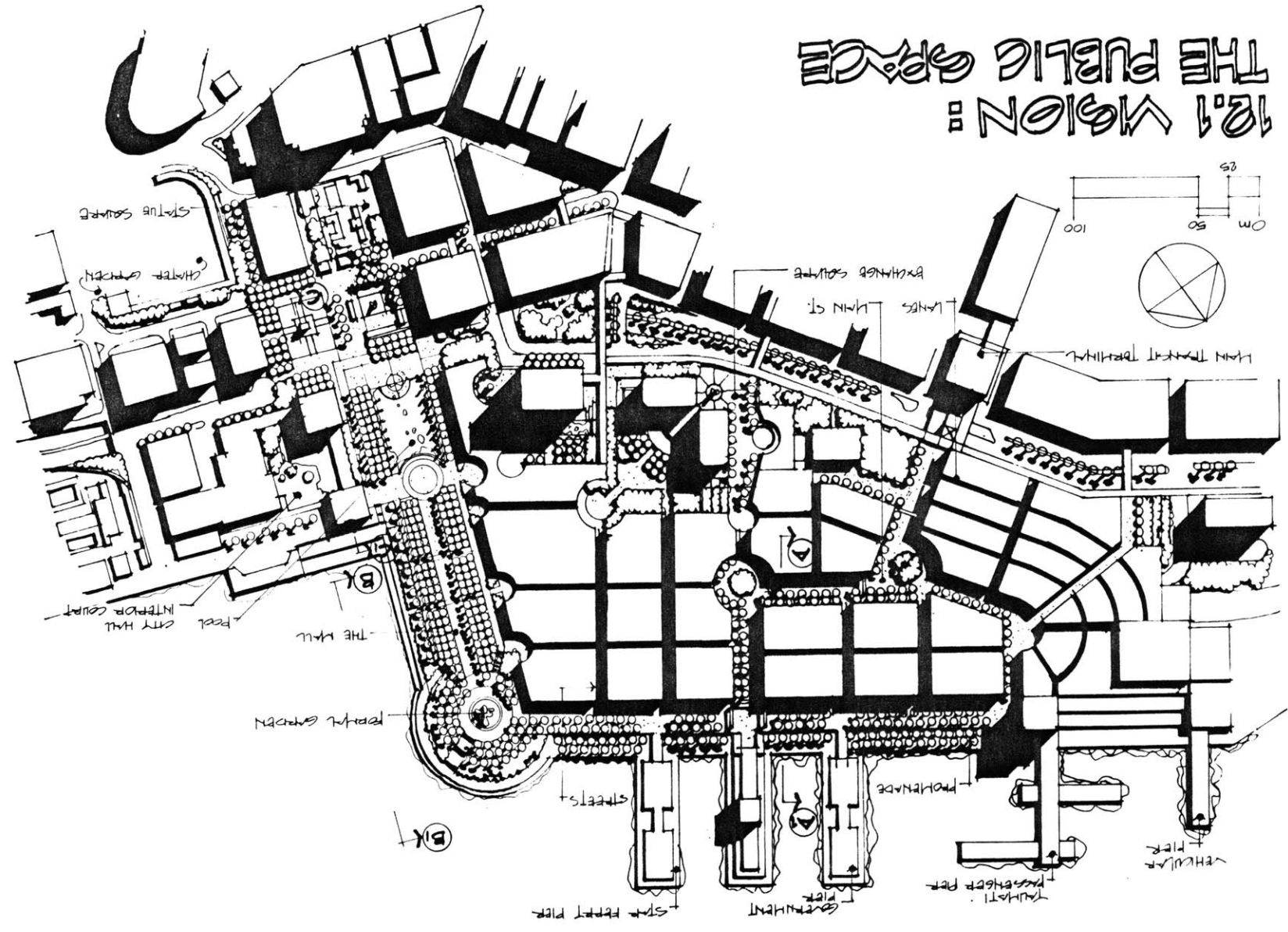
4.5.3 Composite Movement Systems

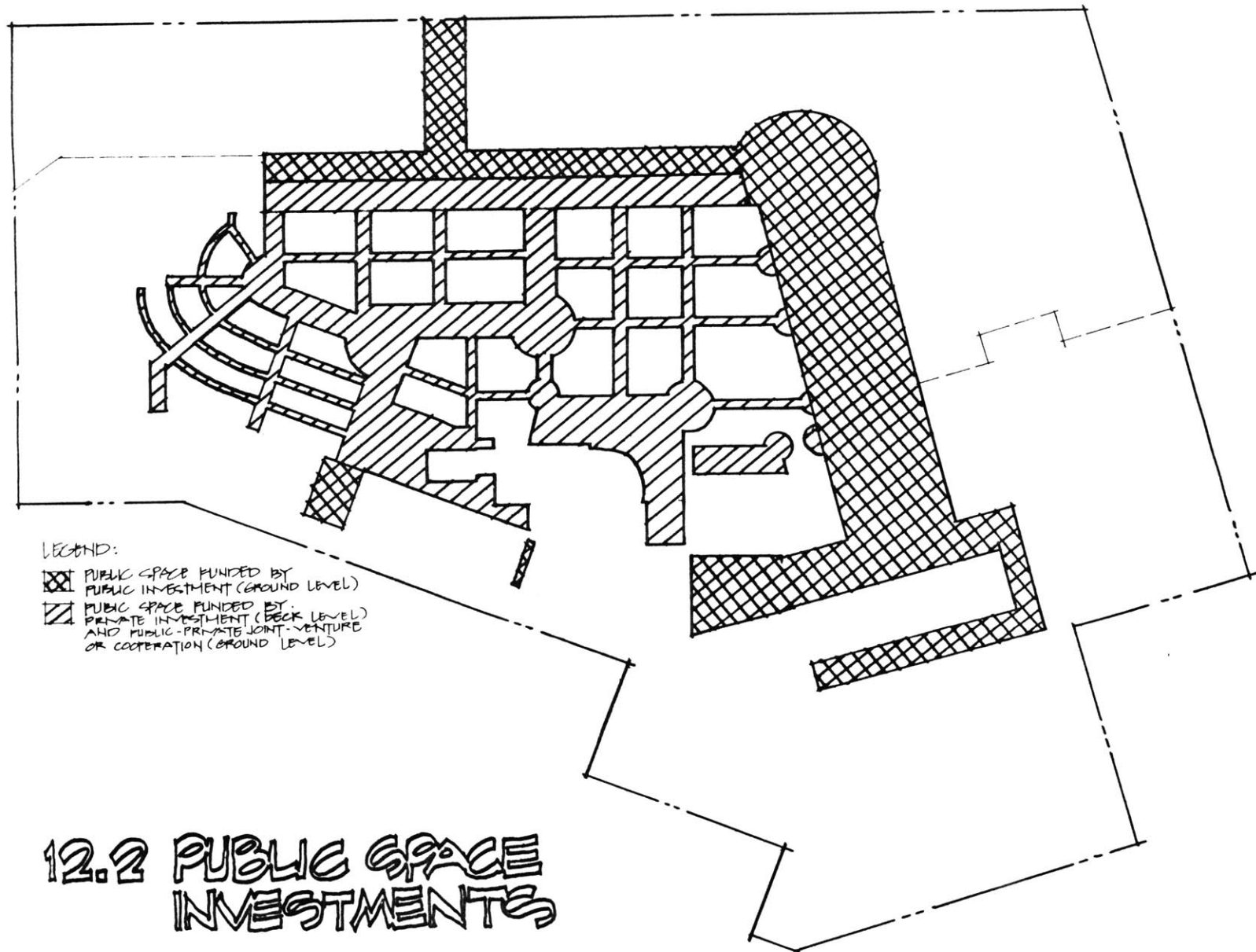
The composite movement systems are multi-level with public transport at the lower levels, and pedestrian sub-systems above and at street grade. New technology such as sky train, high speed ferries, escalators, "bullet" lifts with vistas to the outside would be introduced.

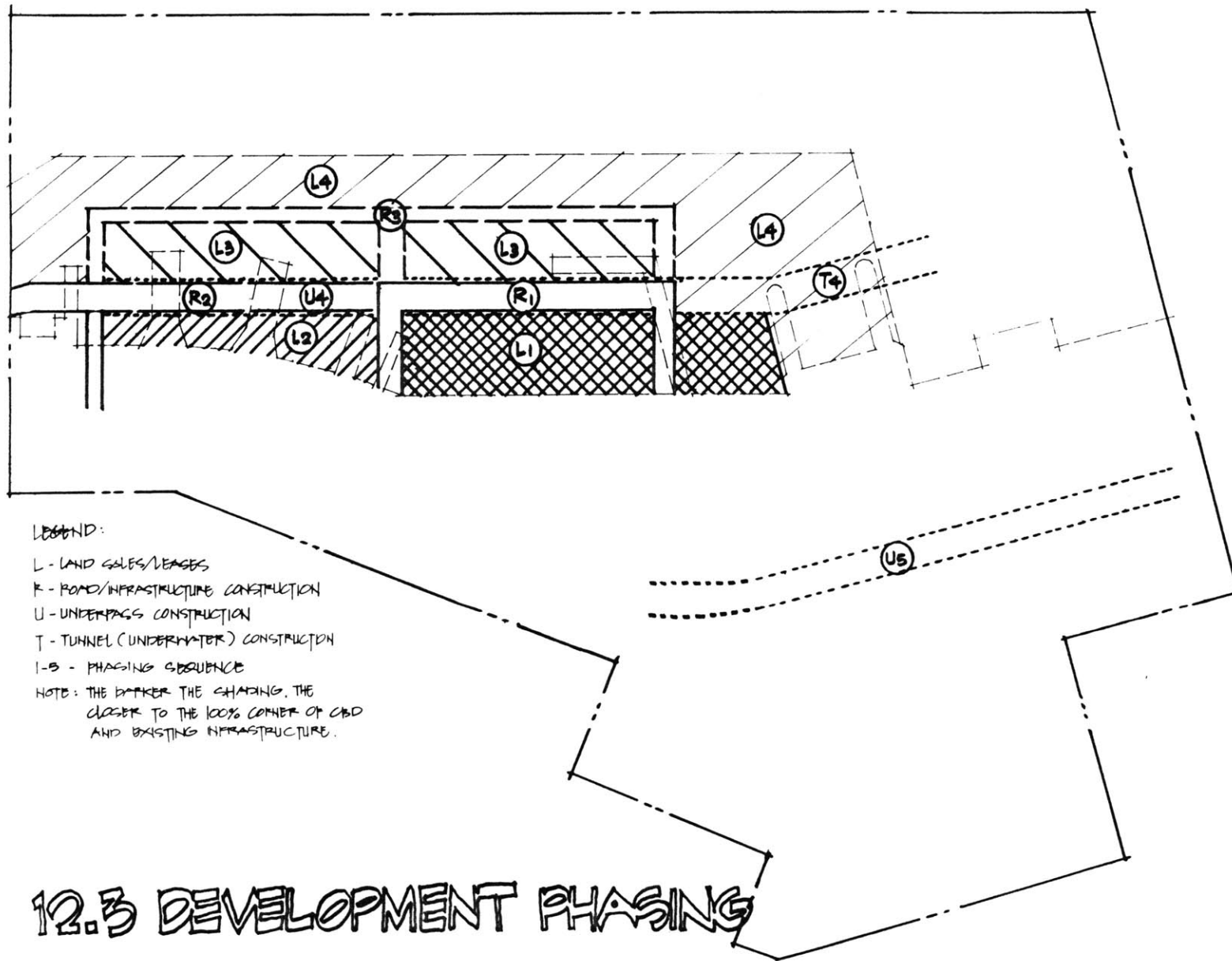
4.5.4 Form and Functional Characteristics

High density uses with mainly office towers would be located in clusters at points of maximum accessibility, while "mediums" and "lows" around secondary movement systems. The streets, lanes and sidewalk surfaces would be opened up to bring light and air to the underground circulation level. Under-ground plazas or "mixing chambers" occur at key confluence of circulation.

12.1 VISION : THE PUBLIC SPACE







Visually, the new office-civic center and the pedestrianized public spaces will create a strong, coherent and unique image. It will provide a "connection block" integrating the existing and new urban fabric, with public spaces responsive to human density requirements. Using a hierarchy of streets, lanes, gates and covered arcades, it will also provide highly visible and expressive entry points on all major movement paths at all levels between the major landmarks.

Functionally, the new CBD waterfront will be predominantly for office activities. Access would be patterned after and integrated with the old CBD core system. Externally its focus will be the "mall" which extends from Statue Square northward, linking the waterfront promenade. Internally its focal point would be the "main street" on the upper deck level and the waterfront road at below- and at-grade level. Its design will provide for pedestrian separation from vehicular movement at points of high density,

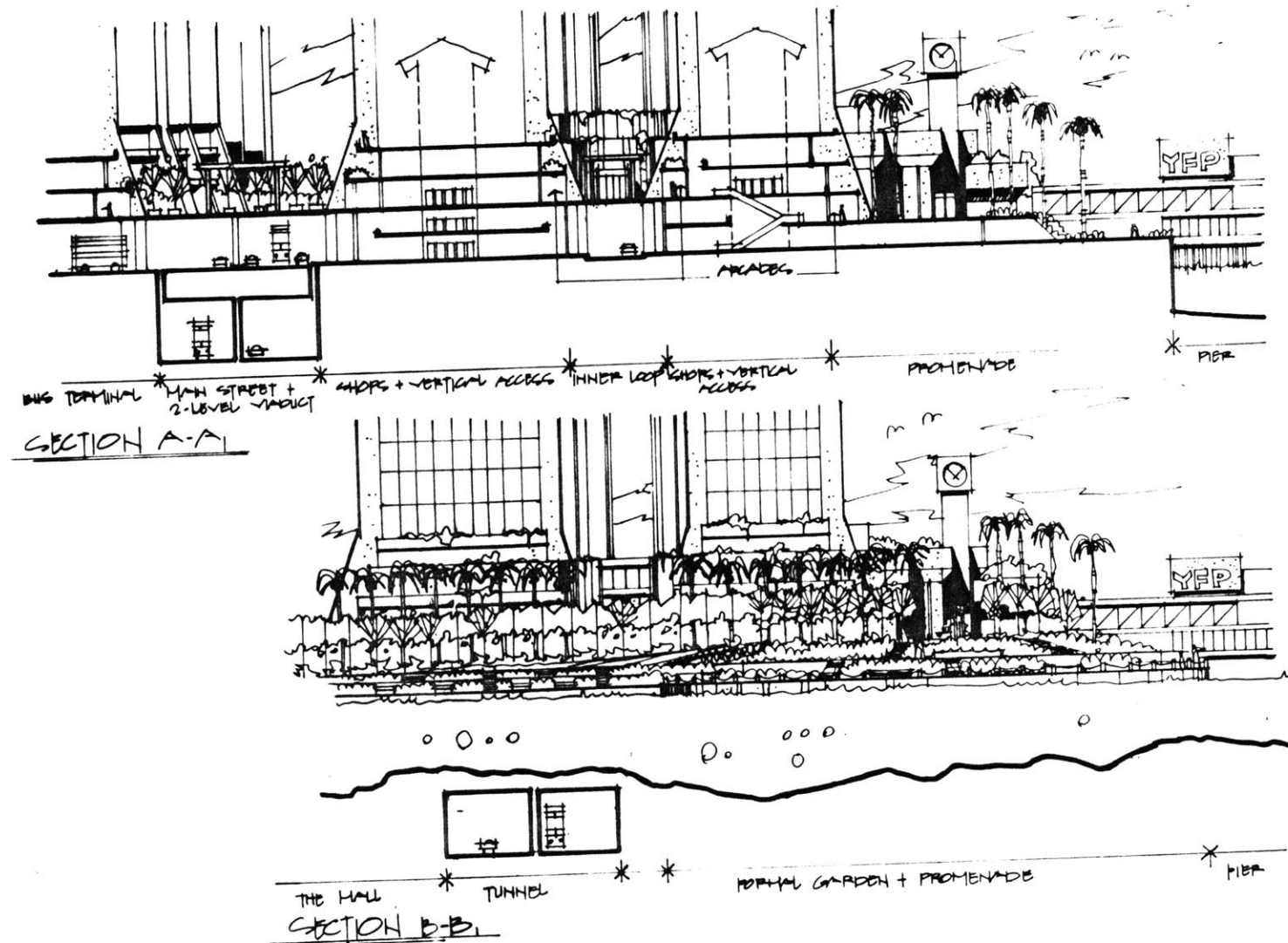
careful expansion of alternative paths of movements to favor the larger number of people, main land and sea transport terminals for the CBD and its waterfront, and 24-hours of activities in the area.

Amenities on a long term basis will be provided for people who still move over public space on the ground. In addition to multi-level circulation, a "special pedestrian zone" is designated around the Statue Square and at the waterfront. Depending on the needs of the users, this zone has three progressions, including 1) the preserved original amenities of the Statue Square and the pedestrianization of Chater Road; 2) the new Civic Center (City Hall and Urban Council Extension) and a water display/outdoor ski-ring; and 3) a formal "mall" with pavilions, kiosk and open lawn, or a marina for more active recreation purposes, all terminating into a formal garden which links to the waterfront promenade. For short term basis, in fact, pedestrianization at a small scale can be carried out in the Chater Road area, which could

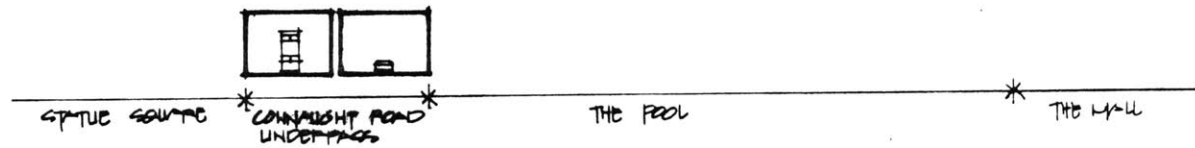
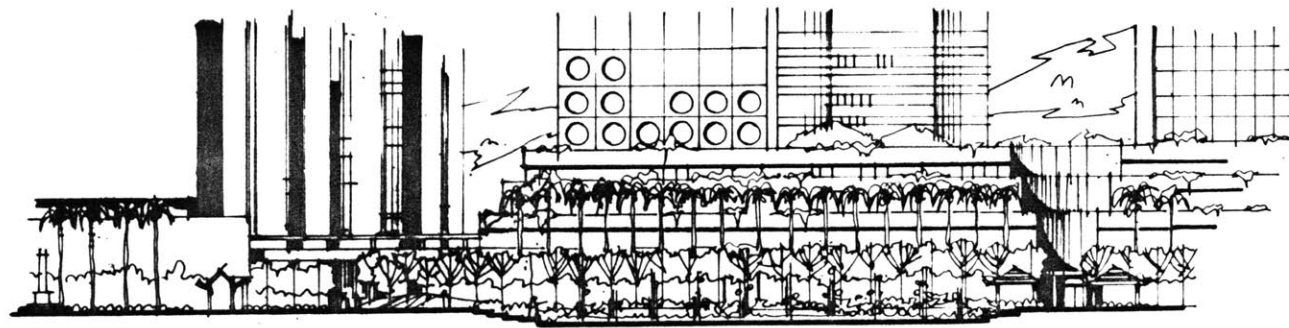
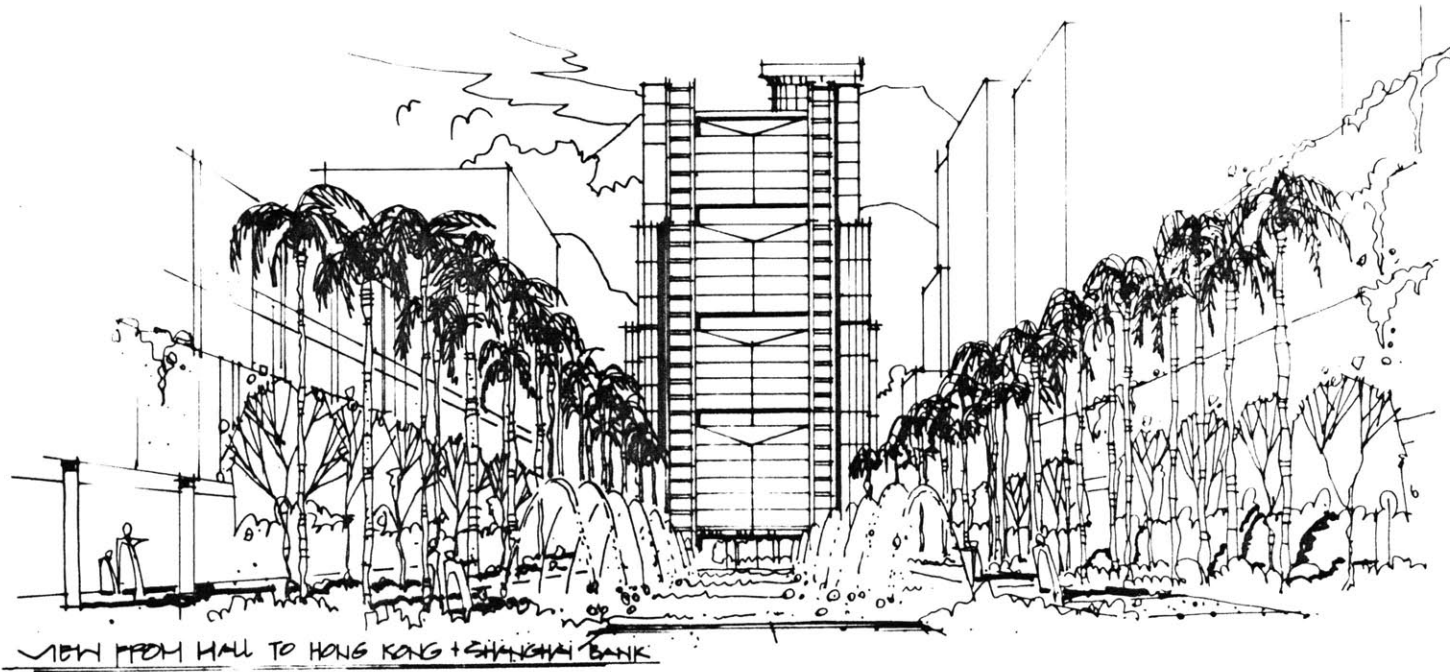
be closed to all traffic with landscape treatment and pedestrian amenities for open air activities, such as public forum, debates, concerts and exhibitions. These different spaces and amenities will serve different ceremonial, civic and festive functions in the future.

In addition, there will be wider sidewalks in key areas near Mandarin Hotel, Connaught Center and other areas. This will be possible when traffic is diverted underground through the viaduct and the Connaught Road underpass. Special pavings, lighting, benches, standard and specimen trees, outdoor urban art, trash receptacles, information kiosks and proper signage will be designed to give identity to the areas. Shelter structures for surface transit passengers should be provided for bad weather.

As well, the natural landscape would be an integral part of the public space system and would provide some regional and "soft" character to the waterfront. The overall



13. HIGHLIGHTS I



14. HIGHLIGHTS II

treatment would preserve, enhance and reinforce both the existing and the new landscapes. The materials would characterize the sub-tropical south China region, including the powerful and clean Royal Palms, textually rich Chinese Fan Palm and Plumerias, the city's own colorful Bauhinias, and the soft Jasmines, all creating a pleasant urban habitat.

4.5.5 Summary

The office-civic megastructure will achieve a new "sense of place" by synthesizing the elements of historical urban forms with that of the contemporary technology. Coexisting with some of the other sub-centers, it will continue to be the dominant center with its own central function as an office-civic center. It will improve and further enhance the image of urban Hong Kong, which has already transformed from a "regional" city into an "international" city. It will also reflect its unique entrepreneurial spirit, atmosphere and vibrancy.

By applying the "corporate strategy" and by guiding and redistributing private development gains for public use and enjoyment, it will also address the broader issue of distribution equity. To achieve this and other development objectives, the strategy may take two forms: 1) by the "incremental" supply of land parcels and the provision of public infrastructure; and 2) by the "aggregate" provision of public infrastructure to induce development and market demand for land. While the former conforms to the existing development strategy which minimizes government expenditures, the latter, however, may also be considered as an alternative, should the situation warrants its application (9). Assuming that the existing development strategy will remain unchanged for the short term, the general scope of public and private investments and development phasing is outlined in Exhibits 12.2 and 12.3 respectively.

Thus the public spaces, as an important part of the infrastructure, should have a significant role to play for

the future of the CBD. So that amidst the "landscape of capital" at the CBD waterfront, it will be a piece of urban artifact that deserves some deeper understanding beyond its sole physical existence.

5.0 SUMMARY AND RECOMMENDATIONS

This thesis is a point of terminal as well as a point of departure for some long term work in urban design and planning. Using the Hong Kong CBD waterfront as a case, it has at a broader level tried to theoretically reassess the relationship of political ideology with the physical environment. In doing so, it has outlined a range of possible scenarios, alternatives and options for its future. Using scenario planning as a methodology, hopefully it has retained its "robustness" and flexibility. Obviously, if in reality there are any new policies or happenings that deviate from the context or the unexpected, then a new scenario, and probably the context too, might have to be rewritten. But nevertheless, this thesis could serve as the initial basis for public and private actions, investments, design and development guidelines for the study area.

The lessons learned from working on this thesis are the intellectual process in creating an initial tool that has the potential to induce some positive change, and the exposure to a new and unconventional decision-making and analytical method. However, the approach so far is very intuitive and conceptual, and many questions still remain unanswered. Perhaps some other quantitative techniques such as a cost-benefit analysis, an impact assessment on the alternatives and options, or implementation strategies on some of the scenarios would have helped to better substantiate some of the arguments. But these are beyond the scope of this thesis and hopefully they could be done in the future when more information and resources are available.

6.0 FOOTNOTES

- (1) Wack.
- (2) Hambrick.
- (3) Sit, p. 78-102.
- (4) Pun, v.1, p. 63 and fig. 6.1.
- (5) Jao, et. al., p. 551-572.
- (6) The costs and benefits of high land prices are very controversial, but the general prosperity in the past few decades seems to be able to justify its costs. But nevertheless, proceeds from land sales and leases can be found in the Annual Government Reports.
- (7) Lee.
- (8) Lambot.
- (9) The new proposed international airport and related infrastructure is a good example for the alternative "inductive" strategy.

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